

ESTIMATED FLOOD LOSSES AND SAVINGS FOR 1942 AND 1943¹

By BENNETT SWENSON

Monetary losses from floods in the United States have been estimated at about \$98,500,000 during the year 1942, and nearly \$200,000,000 during 1943. Lives lost as the result of floods in the 2 years total 173. The savings, as the result of the flood forecasting and warning service, are reported at about 60 million dollars.

¹ Annual flood losses and savings for previous years have been published in the MONTHLY WEATHER REVIEW as follows:

Year	Issue of REVIEW	Pages
1933	Vol. 62, No. 1, Jan. 1934	25-27
1934	Vol. 62, No. 12, Dec. 1934	465-467
1935	Vol. 63, No. 12, Dec. 1935	362-365
1936	Vol. 65, No. 1, Jan. 1937	28-31
1937	Vol. 66, No. 12, Dec. 1938	426-430
1938	Vol. 68, No. 9, Sept. 1940	262-263
1939	Vol. 68, No. 11, Nov. 1940	329-330
1940	Vol. 69, No. 7, July 1941	217-218
1941	Vol. 71, No. 11, Nov. 1943	185-186

Prior to 1933 losses and savings have been published monthly, as a rule.

Outstanding among the floods during 1942 were the disastrous flash floods in the headwater areas of the Delaware, Susquehanna, and Allegheny River basins, resulting in the loss of 45 lives; a record-breaking flood in portions of the Potomac and Rappahannock River basins in October; a major flood in the Willamette River in November; and widespread flooding in the Central West, from Minnesota to Texas, during the summer months.

The major flood event of the year 1943 was the widespread and record-breaking flood during May, covering most of 7 central states from Oklahoma to Michigan. The most destructive flood in point of loss of life, considering the small area involved, occurred in the Little Kanawha River in West Virginia during August, in which 23 lives were lost. An unusually early midwinter flood in the Ohio River began in December 1942 and continued into January 1943, reaching major proportions. Unusual also were the record-breaking floods and ice jams in the upper Missouri River in March and April, resulting from rapid melting of low altitude snow in eastern Montana and North Dakota.

ESTIMATED FLOOD LOSSES AND SAVINGS FOR 1942

River and drainage	Tangible property	Matured crops	Prospective crops	Livestock and other movable farm property	Suspension of business	Total	Lives lost	Reported savings as the result of warnings
HUDSON BAY DRAINAGE								
Red River of the North	\$2,500					\$2,500		
ST. LAWRENCE DRAINAGE								
<i>Lake Michigan</i>								
Grand River	63,575				\$1,250	64,825		\$185,000
<i>Lake Huron</i>								
Saginaw River	52,400	\$5,000		\$25,000	3,350	85,750		10,000
ATLANTIC SLOPE DRAINAGE								
Merrimack River	151,000		\$2,000			153,000		
Connecticut River						40,000		
Hudson River	20,000					20,000		
Schuylkill River	7,200				1,250	¹ 1,084,160	4	905,100
Delaware River						11,500,000	25	
Susquehanna River	3,086,200		¹ 188,000			³ 4,074,200	4	
Potomac River	2,686,410	275,100	436,100	56,500	17,500	3,471,610	2	253,500
Rappahannock River	1,739,490		228,140	10,300		1,977,930		
James River	183,300	86,850	21,050	13,500	27,500	332,200		197,500
Roanoke River			⁴ 26,000		8,500	34,500		17,500
Neuse River	10,000	87,000	10,000		600	107,600		
Pee Dee River	5,230		780	2,400	19,150	27,560		13,000
Santee River			4,800		24,000	31,800		20,900
Savannah River					4,000	4,000		10,000
Altamaha River	12,300	1,200	22,000	13,900	20,900	70,300		89,000
EAST GULF OF MEXICO DRAINAGE								
Apalachicola River	100		150	1,000	12,000	13,250		8,500
Alabama River	39,000	2,000	20,300	5,500	1,000	67,800		42,500
Black Warrior-Tombigbee Rivers	28,200			10,500	19,000	57,700		210,000
Pascagoula River	2,500		300	3,300	7,500	13,600		8,500
Pearl River				3,000		3,000		6,000
MISSISSIPPI SYSTEM								
<i>Upper Mississippi Basin</i>								
Chippewa River	1,596,000	104,800	25,100	10,000	19,000	1,754,900		65,000
Root, Whitewater, and LaCrosse Rivers	24,000	20,000	122,500	6,250	10,000	182,750		7,000
Wisconsin River	2,000	3,600	7,900	200	500	⁵ 37,900		5,500
Rock River	300					300		3,000
Cedar-Iowa Rivers	102,000	25,000	190,500	30,000		347,500	1	6,000
Salt River	5,000	1,000	420,000			426,000		
Mississippi River above Cairo, Illinois	663,050	54,500	1,973,106	19,650	67,100	⁶ 2,842,706		483,900
<i>Missouri Basin</i>								
Checkerboard Creek	83,500		10,050	200		93,750		
Nemaha River	170,126	18,118		3,917		192,161		
James River	250,000		15,000			265,000		
Vermillion River (S. Dak.)	1,000		80,000			81,000		
Big Sioux River	15,000		200,000	1,000		216,000		
Floyd River	200,000		175,000	5,000		380,000		
Salt Creek	336,779		15,720	232,105	9,200	593,804	1	5,100
Solomon River	44,850	31,633	45,267			121,750		2,900
Smoky Hill River	78,300	182,683	311,067	21,500	15,500	609,050		42,000
Republican River	134,650	30,584	295,581	4,000	1,500	466,315		
Big Blue River	18,700	38,390	43,000	4,000	3,300	107,390		
Kansas River	123,000	268,500	140,720	7,000	10,000	549,220		15,000
Grand River	196,002		2,150,355	1,435		2,347,792		
Chariton River	3,335		108,905			112,240		
Osage River	69,979	5,000	288,789	7,600		371,368		
Missouri River	2,038,850		13,947,150	16,400	1,700	16,004,100		359,800

See footnotes at end of table.

ESTIMATED FLOOD LOSSES AND SAVINGS FOR 1942—Continued

River and drainage	Tangible property	Matured crops	Prospective crops	Livestock and other movable farm property	Suspension of business	Total	Lives lost	Reported savings as the result of warnings
MISSISSIPPI SYSTEM—continued								
<i>Ohio Basin</i>								
Allegheny River.....	\$6,288,850		1 \$562,000			\$6,850,850	12	
Big Sandy River.....						1,500,000	2	
Scioto River.....		\$100,000				100,000		
Green River.....	1,000		15,000		\$1,000	17,000		
Wabash River.....	38,100	25,600	212,750	\$9,000	25,000	310,450		\$58,850
Cumberland River.....	160,000	70,000	90,000	1,000	16,300	337,300		158,500
French Broad River.....	10,240	1,200	34,000	100		45,540		2,000
Tennessee River.....	126,775	32,015	38,000	14,480	7,522	218,792		50,000
Ohio River.....	7,088,069	49,931	11,500	3,000	13,750	7,166,250	2	14,451,00
<i>White Basin</i>								
Black River.....	5,000			1,000	1,000	7,000		4,000
White River.....	58,000		28,400	7,500	10,000	103,900		11,250
<i>Arkansas Basin</i>								
Chikaskia River.....	105,400	312,000	81,000	1,000		499,400		
Purgatoire River.....	417,600		19,400	65,100	28,100	\$ 530,200		
Cimarron River.....	520,670	55,000	5,500	5,000	10,000	1,378,170		10,000
Neosho River.....	21,300	21,300	79,250		500	122,350		10,000
North Canadian River.....	180,300	1,000	113,000	13,000	16,900	324,200		6,000
Canadian River.....	161,180	3,550	62,350	6,900	13,180	247,160		37,700
Arkansas River.....	1,879,775	84,200	1,198,850	45,400	65,800	10 3,363,025		517,000
<i>Red Basin</i>								
Little River.....	150		6,000	500	500	7,150		5,000
Sulphur River.....	33,000		15,000	2,500	1,500	52,000		15,000
Cypress River.....	1,500		5,000		1,000	7,500		2,500
Ouachita River.....	84,400	260,000	30,000	10,000	10,000	394,400		220,000
Red River.....	128,500	136,000	11 1,420,000	18,900	40,500	1,743,900		143,000
<i>Lower Mississippi Basin</i>								
Yazoo River.....			300,000		175,000	475,000		25,000
WEST GULF OF MEXICO DRAINAGE								
Trinity River.....	4,187,500	5,820,350		244,000	182,000	10,433,850	2	2,717,000
Brazos River.....	10,000	750	78,500	2,500	26,000	117,750		5,625
Colorado River.....	4,000			1,000		5,000		15,000
Guadalupe River.....	6,200	239,650	146,500	3,650		396,000		637,500
Nueces River.....	48,500	90,000	125,000	6,500		270,000		280,000
Pecos River.....	82,000	20,000	53,000		10,000	165,000		
Rio Grande.....	42,700	202,250	854,500	2,000		1,101,450		22,000
GULF OF CALIFORNIA DRAINAGE								
<i>Colorado Basin</i>								
Gunnison River.....	2,850					2,850		
PACIFIC SLOPE DRAINAGE								
Sacramento River.....	1,184,600	6,000	698,380	14,000	52,500	1,955,480		128,500
Eel River.....	22,000					22,000		4,000
Willamette River.....						6,894,000	10	
Total.....	37,145,985	8,771,754	27,808,210	996,187	1,013,352	98,506,198	66	22,506,525

¹ Including matured crops.² Includes losses of \$1,075,710 which were not classified.³ Includes losses of \$800,000 which were not classified.⁴ \$14,000 of which represents all crop loss.⁵ Includes losses of \$23,700 which were not classified.⁶ Includes losses of \$65,300 which were not classified.⁷ Includes losses of \$1,000 which were not classified.⁸ Furnished by U. S. E.⁹ Includes losses of \$782,000 which were not classified.¹⁰ Includes losses of \$89,000 which were not classified.¹¹ \$720,000 of which represents all crop loss.

ESTIMATED FLOOD LOSSES AND SAVINGS FOR 1943

River and drainage	Tangible property	Matured crops	Prospective crops	Livestock and other movable farm property	Suspension of business	Total	Lives lost	Reported savings as the result of warnings
HUDSON BAY DRAINAGE								
Red River of the North.....	\$815,453	\$4,000	\$155,000	\$1,000	\$55,000	\$1,030,453	1	\$538,000
ST. LAWRENCE DRAINAGE								
Grand and Saginaw Rivers.....	110,300		1,016,300	200	7,000	1,133,800		6,000
Maumee River.....						7,400,000		2,000,000
ATLANTIC SLOPE DRAINAGE								
Schuylkill River.....	647				171	818		6,000
Juniata River.....							4	
Cape Fear, Neuse, and Roanoke Rivers.....	450		17,250		59,000	76,700		124,500
Pee Dee River.....	2,400			12,000	13,700	28,100		17,500
Santee River.....			1,600	24	750	2,374		7,450
Savannah and Ogeechee Rivers.....	750			150	6,700	7,600		30,750
Altamaha River.....	5,500			4,500	27,500	37,500		60,000
EAST GULF OF MEXICO DRAINAGE								
Apalachicola River.....	186,650	5,000	1,500	8,500	96,700	298,350		23,500
Pea River.....	20,000			300		20,300		
Choctawhatchee River.....				2,000		2,000		1,000
Conecuh River.....	1,550			3,200	6,500	11,250		5,000
Oostanula and Etowah Rivers.....			60,000		1,000	61,000		1,000
Coosa River.....	5,500		75,000	10,000		90,500		115,000
Tallapoosa River.....	1,000		2,000	500		3,500		80,000
Cahaba River.....	500		2,500	2,400		5,400		38,000
Alabama River.....	5,000		47,500	15,000		67,500		100,000
Black Warrior and Tombigbee Rivers.....	24,000		20,500	9,300	11,500	65,300		20,000
Pascagoula River.....	29,590			35,860	39,600	105,050		29,800
Biloxi and Crane Rivers.....	1,500		250	250	500	2,500		5,000
Pearl River.....	32,000		400	2,780	5,560	40,740		36,500

ESTIMATED FLOOD LOSSES AND SAVINGS FOR 1943—Continued

River and drainage	Tangible property	Matured crops	Prospective crops	Livestock and other movable farm property	Suspension of business	Total	Lives lost	Reported savings as the result of warnings
MISSISSIPPI SYSTEM								
<i>Upper Mississippi Basin</i>								
St. Croix River.....	\$25,000	\$3,000	\$5,000	\$2,000		\$35,000		\$2,000
Chippewa River.....	100,000	5,000	21,000	2,000	\$25,000	153,000		20,000
Zumbro-Whitewater Rivers.....	10,500	6,000	48,000	2,500	1,000	68,000		8,000
Black, La Crosse, and Trempealeau Rivers.....	388,300	25,000	142,700	4,000	8,900	568,900	1	10,000
Wisconsin River.....	1,220	1,890	11,200		1,300	15,670		27,200
Rock River.....	500				500	1,000		4,500
Iowa River.....	30,000		50,000	5,000		85,000		
Skunk River.....	53,400	1,000	2,019,900	18,875		2,093,175		
Salt River.....	83,000		1,114,500	1,500		1,199,000		
Cuivre River.....	40,000		741,500	3,000	17,500	802,000		
Illinois River.....	2,837,000		5,906,000	16,000	1,001,500	9,760,500	7	1,345,000
Meramec River.....	23,500		100,000		20,000	143,500		
Kaskaskia River.....	339,500		3,871,500	3,500	71,000	4,285,500	4	
Mississippi River above Cairo, Ill.....	7,281,541	146,650	13,407,433	222,846	1,683,900	122,887,126	4	5,051,500
<i>Missouri Basin</i>								
Milk River.....						75,000	2	
Yellowstone River.....	700			8,600		9,300	1	
Little Missouri River.....			12,000			32,000		
Knife River and Spring Creek.....	95,000	35,000	15,000	15,000	5,000	165,000	3	
Burnt and Square Butte Creeks.....						6,000		
Heart River.....	630,000	90,000	2,000	4,000	9,000	735,000	1	200
Grand River (S. Dak.).....	5,700	1,500		4,100		11,300		5,000
Niobrara River.....	41,600		500	500		42,600		
James River.....	211,500		705,700		2,500	919,700		
Big Sioux River.....	1,000					1,000		
Little Sioux River.....	22,600		229,400		1,800	253,800		
Boyer River.....	4,000					4,000		
Elkhorn River.....	200					200	1	
Solomon River.....	1,000		15,000			16,000		8,000
Kansas River ¹	1,732,504		8,197,147	179,638		10,109,349		211,000
Osage River.....	1,104,017	15,000	6,675,718	90,518		7,885,253	5	31,000
Gasconade River.....	128,990		637,681	8,450		773,121		
Missouri River ⁴	13,997,353	366,527	26,358,335	556,639	312,928	41,591,782		11,275,760
<i>Ohio Basin</i>								
Clarion River.....	75,000					75,000		
Tygart River.....	1,500	20,500	11,250		600	33,850	1	
Youghiogheny River.....							2	
Little Kanawha River.....						1,365,000	23	
Scioto River.....	2,000	1,500	500		50	4,050		3,000
Green River.....	6,000	50,260	48,000		7,000	111,260		68,200
White-Wabash Rivers.....	6,517,900	421,125	14,319,200	432,675	517,750	23,208,650	13	2,646,700
Cumberland River.....	3,000	5,000	6,000		5,450	19,450		25,000
Tennessee River.....	5,328	22,625	1,210	295	19,910	49,368		11,017
Ohio River.....	1,697,706	1,088,810	1,119,170	64,709	1,083,620	7,549,015	5	4,185,750
<i>White Basin</i>								
White River.....	659,106	276,260	6,064,823	131,540	188,700	7,320,429	1	1,392,500
<i>Arkansas Basin</i>								
Walnut River.....	13,000		\$ 154,000			169,000		
Cimarron River.....	148,000		267,050			415,050		
Verdigris River.....	1,430,840		3,748,970		369,170	5,548,980		119,000
Neosho River.....	1,507,508	34,500	2,442,220	137,000	596,440	4,717,668		92,500
North and South Canadian Rivers.....	273,420		1,423,560		78,010	1,774,990	6	20,500
Arkansas River.....	5,960,810		9,271,190		1,828,300	8,210,425	19	8,261,000
<i>Red Basin</i>								
Sulphur River.....	550			300	750	1,600		2,500
Ouachita River.....	50		10,000	2,000	30,000	42,050		200,000
<i>Lower Mississippi Basin</i>								
Tallahatchie River.....	10,000		275,000		10,000	295,000		
Mississippi River.....	27,200		483,500		23,500	534,200		85,300
WEST GULF OF MEXICO DRAINAGE								
Sabine River.....	1,128,000	84,000	446,000	10,000	300,000	1,968,000		500,000
Trinity River.....	139,000	500	473,000	2,400	5,800	620,700		121,000
GULF OF CALIFORNIA DRAINAGE								
<i>Colorado Basin</i>								
Price River.....						70,000		
GREAT BASIN DRAINAGE								
Great Basin drainage.....				30,000		240,000		
PACIFIC SLOPE DRAINAGE								
Kings, Kern, Tule, and Kaweah Rivers.....						6,033,299	1	
San Joaquin and Mokelumne Rivers.....	52,000	150,000	27,000	5,600		234,600		500,000
Sacramento River.....	225,700	1,500	139,700	500	9,500	376,900		31,000
Eel River.....	25,000					25,000		15,000
South California coastal drainage.....							1	
Snake River.....						609,600	1	
Columbia River.....	26,500	9,000	103,200	500	58,500	197,700		650,500
Total.....	50,365,593	2,871,147	112,521,617	2,074,149	8,626,059	199,733,145	107	40,192,627

¹ Including losses of \$144,756 which were not classified.² Including losses of \$20,000 which were not classified.³ Includes May-June damages by sub-basins as follows: Kansas, \$4,738,318; Blue, \$1,372,656; Republican, \$1,068,704; Solomon, \$385,137; Saline, \$30,681; Delaware, \$791,825; Wakarusa, \$232,232; Vermillion, \$178,433; Stranger, \$417,730; Soldier, \$103,188; Mill Creek, \$789,945.⁴ Includes damage of \$3,246,260 for Grand River during May and June.⁵ Including losses of \$2,495,000 which were not classified.⁶ Including matured crops.⁷ Including losses of \$2,000 which were not classified.⁸ Including losses of \$4,843,925 which were not classified.⁹ Including losses of \$210,000 which were not classified.